

## NCore Readiness Self-Assessment for State/local/Tribal Agencies

Agency Name Idaho Department of Environmental Quality Date Prepared May 28, 2008 By Toole/Frisch/Ramsdell

### A. NETWORK DESIGN

- a. Proposed NCore Station #1     NEW SITE **X** EXISTING SITE AQS #**16-001-0010**  
 b. Proposed NCore Station #2     NEW SITE     EXISTING SITE AQS #                      
 c. Proposed NCore Station #3     NEW SITE     EXISTING SITE AQS #

Item	Criteria	Status	Next Steps
1 Urban or Rural? -- <b>Urban</b>	Largest MSA(s) covered by urban station. <b>Boise City</b>		
2 Scale of Representation	Neighborhood <b>X</b> Urban <u>    </u> Regional <u>    </u> Other <u>    </u>		Neighborhood scale or larger highly recommended.
3 Population Oriented	Yes <b>X</b> No <u>    </u>	<b>Population Exposure</b>	Population oriented monitoring highly recommended.
4 Proximity to local emissions sources	No biasing local sources within 500 meters for urban stations. No biasing sources or large urban population centers within 50 km for rural stations.	<b>Highway is 303.4 meters away from site (GIS)</b>	
5 Suitability for meteorological measurements	Distance from obstructions is 10x height of obstruction above station. See Volume IV: Meteorological Measurements Version 1.0 (Draft)	<b>Closest obstructions: buildings (W &amp; NW) - the closest is 212.3 meters, or 7x height of obstruction</b>	
6 Information (including site photographs) provided for AMTIC NCore web site	Photographs in 8 cardinal directions needed.	<b>See attached photos; electronic version is on CD provided</b>	
7 Station Coordinates	Determined by GPS	<b>43.607568 -116.348434</b>	
8 Site visited by EPA in past 3 years	Meets applicable Appendix D and E criteria.	<b>Yes; May 20, 2008</b>	New sites should be visited by EPA before final NCore approval is requested

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	Item	Criteria	Status	Next Steps
9	Network leveraging	Collocation with other networks encouraged: STN <b>X</b> Supplemental CSN__ NATTS __ CASTNET __ IMPROVE __ NADP __ PAMS __ Other __	<b>Speciation trends monitor located at same site</b>	
10	Applicable site fields updated in AQS including coordinates	Consider setting additional monitor type to "Proposed NCore" (station should also be categorized as SLAMS).	<b>All St. Luke's monitors have been set up as Proposed NCORE</b>	
<b>LOGISTICAL CONSIDERATIONS</b>				
11	Site access	Access for at least five years is suggested.	<b>Criteria met</b>	
12	Power requirements and availability	200A service suggested. 240vac service typically needed for a/c. Key power outlets protected by UPS units.	<b>Criteria met; all outlets are surge protected</b>	
13	Telecommunications	Minimum dial-up service. Broadband service suggested for polling of 1-minute data.	<b>Raven cellular modems being used with IP addresses</b>	
14	A/C cooling capacity	Minimum 18,000BTU a/c capacity.	<b>Criteria met</b>	
15	Interior space	Sufficient for minimum of two 19" inner dimension, 6' tall instrument racks and related equipment and accessories, or equivalent shelf space.	<b>Criteria met</b>	

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16	Exterior space (roof and accompanying platforms)	Allow for: a) 1m spacing of low-volume PM sampler inlets – up to seven* required plus PEP audit sampler. b) 1m spacing between low-volume PM sampler inlets and gas manifold cane or Teflon tubing. Facilitate usage of TTP audit vehicle or trailer.	<b>A shelter is located at the site; the roof is used for the speciation monitor. Next to the shelter is a wooden platform allowing 1m spacing of PM<sub>2.5</sub> FRMs.</b>	
17	10m tower compatibility	Required for meteorological equipment, NO <sub>y</sub> converter. Room to drop tower for calibrations and audits.	<b>A 10m met tower is on site, but a 10m mast will be attached to the shelter for the NO<sub>y</sub> converter</b>	

\*Notes

1. PM<sub>2.5</sub> FRM sampler
2. PM<sub>10c</sub> FRM sampler for PM<sub>10-2.5</sub> mass (dichotomous sampler could substitute for #1 and #2 if future FRM/FEMs available) or PM<sub>10-2.5</sub> continuous
3. PM<sub>2.5</sub> continuous sampler (does not have to be FEM/ARM )
4. PM<sub>2.5</sub> speciation sampler (CSN or IMPROVE)
5. URG sampler for carbon channel (PM<sub>2.5</sub> speciation) if using CSN samplers
6. Sampler for PM<sub>10-2.5</sub> speciation (unless dichotomous sampler or PM<sub>2.5</sub> speciation sampler (spare channels) is used)
7. URG sampler for PM<sub>10</sub> carbon speciation (speculative need for PM<sub>10-2.5</sub> carbon speciation by difference)

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### B. REQUIRED PARAMETER/METHODOLOGICAL EVALUATION

- d. Proposed NCore Station #1 ☐ NEW SITE ☒ EXISTING SITE AQS # **16-001-0010**  
 e. Proposed NCore Station #2 ☐ NEW SITE ☐ EXISTING SITE AQS # \_\_\_\_\_  
 f. Proposed NCore Station #3 ☐ NEW SITE ☐ EXISTING SITE AQS # \_\_\_\_\_

	Parameter	Existing Measurements		Future Measurements		Notes
		Sampling Began	Method	Date Expected	New or Relocated	
1	Ozone	<b>5/01/07</b>	<b>087 - Teledyne API, Model 400E</b>			Year-round operation <b>As of 5/01/08</b>
2	Sulfur dioxide			<b>7/01/08</b>	<b>API M100EU</b>	High sensitivity
3	Carbon monoxide			<b>7/01/08</b>	<b>API M300EU Ultra (CE)</b>	High sensitivity
4	Nitrogen oxides (NOy)*			<b>7/01/08</b>	<b>API M200EU</b>	High sensitivity External converter mounted at 10m
5	PM2.5 mass	<b>9/26/06</b>	<b>R&amp;P Manual until 10/19/07; now Sequential</b>			1-in-3 day FRM/FEM integrated <b>Now 1:6</b>
6	PM2.5 continuous	<b>7/01/06</b>	<b>R&amp;P PM<sub>2.5</sub> TEOM AB</b>			FEM or ARM preferred but not required <b>It is not designated</b>
7	PM2.5 speciation	<b>7/01/06</b>	<b>MetOne SASS URG 3000</b>			1-in-3 day (Met One & URG 3000N samplers) or IMPROVE <b>Now 1:3</b>
8	PM10-2.5 mass			<b>7/01/08</b>		Integrated samplers (FRM difference or dichot) or continuous monitor <b>Two FRMs</b>

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	Parameter	Existing Measurements		Future Measurements		Notes
		Sampling Began	Method	Date Expected	New or Relocated	
9	PM10-2.5 speciation					Details to be provided later (2008) on sampling requirements.
10	Wind speed and direction**			7/01/08		At 10 m <b>Working</b>
11	Ambient temperature**			7/01/08		At 2 m <b>on power</b>
12	Relative humidity**			7/01/08		At 2 m <b>&amp; comm-</b>
13	Optional – Vertical wind speed, solar radiation, precipitation, barometric pressure, delta-T for 2-10m.			7/01/08		<b>unications</b>
14	Optional – Ammonia and nitric acid					Pilot project using denuders scheduled for 2008-2009.

### Notes

\* Although the measurement of NOy is required in support of a number of monitoring objectives, available commercial instruments may indicate little difference in their measurement of NOy compared to the conventional measurement of NOx, particularly in areas with relatively fresh sources of nitrogen emissions. Therefore, in areas with negligible expected difference between NOy and NOx measured concentrations, the Administrator may allow for waivers that permit high-sensitivity NOx monitoring to be substituted for the required NOy monitoring at applicable NCore sites.

\*\* EPA recognizes that, in some cases, the physical location of the NCore site may not be suitable for representative meteorological measurements due to the site's physical surroundings. It is also possible that nearby meteorological measurements may be able to fulfill this data need. In these cases, the requirement for meteorological monitoring can be waived by the Administrator.

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### C. SUPPORTING EQUIPMENT EVALUATION

- a. Proposed NCore Station #1 NEW SITE **X** EXISTING SITE AQS # **16-001-0010**  
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	Item	Criteria	Status	Next Steps
1	Calibrator (field)	Suitable for trace-level dilutions, see Appendix A audit concentrations. Capable of automated QC checks. Internal O3 generator – photometer preferred.	<b>Have the API 700 Multi-gas calibrator</b>	<b>Need to do acceptance testing &amp; set-up on site Will be used for MDL-level concentrations</b>
2	Calibrator (lab or field)	Suitable for generation of MDL-level concentrations	<b>Will have API 700 in the lab &amp; at the site</b>	
3	Zero Air Source	Compliant with TAD recommendations. Ultra-pure air cylinder recommended for occasional comparison to zero air source. Capacity for 20+ LPM of dilution air.	<b>Using ultra-pure air cylinders from Scott-Marin in CA We have the capacity for 20+ LPM of dilution air</b>	
4	Data acquisition system	Digital-capable system	<b>Campbell Scientific CR23X &amp; two Raven cellular modems</b>	
5	Gas cylinder standards	Suitable for trace-level dilutions, see Appendix A audit concentrations, EPA Protocol certifications. Special low-level standards needed for MDL concentrations (CO, SO2, NOy)	<b>The gases are special low-level standards that meet EPA specifications</b>	
6	Meteorological calibration devices	Provide NIST traceability of required meteorological parameters.		<b>Assessment of calibration equip. &amp; upgrade where needed</b>
7	Sampling manifold	Per Appendix E. Residence time <20 seconds, only glass or Teflon materials, probe and monitor inlets acceptable heights.	<b>Criteria met</b>	

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8	Auditing equipment	Independent calibrator, zero air source and gas standards compatible with trace level specifications. Independent meteorological and flow standards, it not already available.	<b>State Lab's equipment is independent &amp; is compatible with trace-level specifications</b>	
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### D. ORGANIZATIONAL FACTORS

	Item	Criteria	Status	Next Steps
1	Training considerations	Key monitoring personnel have attended OAQPS provided monitoring workshops or equivalent training.		<b>Trace gas training to be provided by API in June 2008</b>
2	Monitoring station documentation	NCore station(s) described in Annual Monitoring Network Plan.	<b>Described in this worksheet, the 2008 Annual Network Plan, and next year's Annual Network Plan if needed</b>	Must be included in plan due on or before July 1, 2009. Discuss siting with health researchers and other data stakeholders.
3	Section 103 funds received and obligated for equipment purchases			Work with EPA Regional contacts.



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**North**



**Northeast**



**East**



**Southeast**



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**South**



**Southwest**



**West**



**Northwest**

